

lined, nearly continuously, with orange scales. It starts on the costa, about 4mm. from apex, runs slightly obliquely inwards to vein 5, then curves sharply outward and turns, running parallel to external margin to its junction with the internal margin, where it becomes obscure. It is outwardly produced on veins 3 and 4. In the other specimen, this line lacks most of the orange scales, and is very obscure, its course being hardly discernible. Terminal intervenular spots very slight, consisting of four or five

very small black scales, not contiguous.

Hind wings white, without silvery luster, the intervenular spots larger than on fore wings, smoky black. Below, the wings are white; terminal dots repeated, enlarged.

Expanse 46 mm. Two ♀♀, El Paso, Texas.

Kindly presented to me by Prof. J. J. Rivers of the University of California.

I have drawn up the following table to separate the species of *Cerura*:—

§ 1. Primaries crossed by about eight angularly undulate black lines.

Secondaries black — *multiscripta* Riley.

Secondaries white.

Lines continuous — *scitiscrupta* Walker.

Lines broken — var. *candida* Lintner.

§ 2. Primaries crossed at basal third by a broad gray band, which may be broken or diffuse or even entirely obsolete.

Primaries dark cinereous—*cinerea* Walker.

Primaries pale cinereous.

A row of dots in median space — var. *cinereoides* Dyar.

Three dentate lines in median space.

Band with defined edges and a few orange scales — *occidentalis* Lintner.

Band of uniform tint, and without orange scales — *modesta* Hudson.

Primaries white.

Transverse band indistinct, though perhaps broken.

Six black spots in an ellipse on disk—*borealis* Boisduval.

Indistinct dentate lines on disk.

Band broad — *scolopendrina* Boisduval.

Band narrow or broken — *albicoma* Strecker.

Transverse band faint or obsolete, rarely distinct.

Black markings much reduced, often largely absent, but not diffuse.

Transverse band faint or absent — *paradoxa* Behr.

Transverse band distinct— var. *placida* Dyar.

Black markings very diffuse, irrorate, size large — *meridionalis* Dyar.

PERSONAL NOTES:— American entomologists will be pleased to hear that the mathematical physical faculty of Heidelberg University has conferred the degree of Doctor philosophiae naturalis (honoris causa) upon Baron Charles Robert von Osten Sacken.

Prof. C. H. Tyler Townsend of the New Mexico College of Agriculture at Las Cruces, has started on a field trip by wagon from there to the Grand Cañon of the Colorado, via Flagstaff. Prof. Wooton, of the same College, and two students accompany him, and they expect to be away two months.

They have arranged to meet Prof. Toumey of the University of Arizona, and his party, consisting of men from the Agricultural Department in Washington, who start by wagon from Tucson, at Flagstaff about the first of July. They will then go on to the Grand Cañon together, remaining in company three or four weeks, and returning by way of the eastern boundary of Arizona. The object of both parties is the collection of insects and plants.

Dr. W. J. Holland of Pittsburg sailed for Europe June 29 and during the summer will prosecute some entomological studies in the museums of London and Paris.

BIBLIOGRAPHICAL NOTES. — II.

BY SAMUEL HENSHAW.

BIOLOGIA CENTRALI-AMERICANA. — COLEOPTERA. Vol. I. By Henry Walter Bates.

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| Cicindelidae, 1881, pt. 13-14, p. 1-18; | gen. sp. |
| 1883, pt. 27, p. 256; 1884, pt. 31, | |
| p. 257-261. | 8 85 |
| Carabidae, 1881, pt. 14, p. 19-40; 1882, | |
| pt. 15-19, p. 41-152; 1883, pt. 21- | |
| 22, 25, 27, p. 153-255; 1884, pt. 31- | |
| 32, 34, p. 261-299. | 144 999 |

Species of the following genera are figured:—

Cicindelidae. — *Cicindela*, 1, 13. *Ctenostoma*, 1. *Odontocheila*, 1, 13. *Oxycheila*, 1. *Oxygonia*, 1. *Pseudoxycheila*, 1. *Tetracha*, 1.

Carabidae. — *Abaris*, 4. *Adrimus*, 4. *Agra*, 12. *Allotriopus*, 4. *Amara*, 4. *Anatrichis*, 3. *Anchomenus*, 4. *Ancistroglossus*, 7. *Anillus*, 6. *Anisodactylus*, 3. *Anisotarsus*, 3. *Apenes*, 7, 8, 13. *Apristus*, 8. *Ardistomis*, 2. *Arthroctictus*, 3. *Aspasiola*, 8. *Aspidoglossa*, 2. *Axinopalpus*, 8. *Barysomus*, 3. *Bembidium*, 6. *Brachinus*, 7. *Calathus*, 4. *Calleida*, 9, 13. *Calophaena*, 6. *Calosoma*, 2. *Carabus*, 13. *Casnonia*, 6, 13. *Catapiesis*, 4. *Catascopus*, 7. *Celia*, 4. *Chlaenius*, 3, 13. *Clivina*, 2. *Clopodus*, 5, 13. *Coptodera*, 7. *Cratocera*, 4. *Cryptobatis*, 8. *Curtonotus*, 4. **Cyr-*

tolaus, 5. *Diaphorus*, 6, 13. *Diploharpus*, 6. *Discoderus*, 3. *Dromius*, 8. *Ega*, 6. **Elliptoleus*, 4. *Euchroa*, 4. *Euproctus*, 8. *Eurycoleus*, 7. *Evarthrus*, 14. *Galerita*, 6, 7. *Gallerucidia*, 9. *Glyptolenus*, 5, 13. *Helluomorpha*, 7. *Hyboptera*, 8. *Hypherpes*, 4. **Ithytolus*, 13. *Lachnophorus*, 6. *Lebia*, 10, 11, 12. *Lelis*, 7. *Leptotrachelus*, 6. *Lia*, 12. *Loricera*, 2. *Loxandrus*, 4, 13. *Loxopeza*, 10. *Menidius*, 8. *Micragra*, 6. **Mioptachys*, 6. *Mizotrechus*, 6. *Morio*, 4. *Moriosomus*, 4. *Nemotarsus*, 7. *Notiobia*, 3, 13. *Notiophilus*, 2. **Ochropisus*, 7. *Omophron*, 2. *Onota*, 8, 13. *Onypterygia*, 5. *Otoglossa*, 8. *Pachyteles*, 2, 13. *Panagæus*, 3. *Pasimachus*, 2. *Pelecium*, 3. **Pelmatellus*, 3. *Pentagonica*, 9. **Percolaus*, 4. *Pericompsus*, 6, 13. *Perigona*, 6. *Pheropsophus*, 7. *Philopheuga*, 9. *Phloeoxena*, 7. *Physea*, 2. *Pinacodera*, 7, 8. *Platynus*, 4. *Platysoma*, 4. *Polpochila*, 3. *Pseudomorpha*, 12. *Scaphinotus*, 13. *Schi-zogenius*, 2. *Selenophorus*, 3, 13. *Stenocrepis*, 3. *Stenoglossa*, 7. *Stenognathus*, 7. *Stenomorphus*, 3. *Stenous*, 3. *Stolonis*, 4. *Tachys*, 6. *Tachyta*, 6. *Tetragonoderus*, 7. *Trechus*, 6. *Xystosomus*, 6.

New genera are marked (*); the figure following the name of the genus denotes the number of the plate. Of the 85 species of *Cicindelidae* found in Central America 18 species occur in America north of Mexico; and of the 999 species of *Carabidae* from Central America, 84 are found in America north of Mexico.

CERURA MODESTA. — In my list of the *Bombyces* taken at electric light in Poughkeepsie, N. Y., given not long since in *Psyche*, occurs the name *Cerura aquilonaris*. This I now believe is an error, and the name should be *Cerura modesta* Hudson. This species was not then described, and the determination was made from a single example in very poor condition taken from the lamps previous to 1890. *C. aquilonaris* Lintn. (= *scolopendrina* Boisd.) probably does not occur in New York. — HARRISON G. DYAR.